Standalone Agency to Map Green Wealth

Given declining forest areas, their monitoring is too important to be left to forest departments alone

SHARACHCHANDRA LELE

Ever since it became possible to take detailed images of the earth from satellites, society's ability to monitor what is happening to its forest or land cover im-

ANIMISHA

proved dramatically. Today, anyone with internet access can use Google maps and see even individual trees in remote areas. But when in the mid-1980s, the National Remote Sensing Agency first published its findings of forest cover change in India, a controversy erupted. The forest departments did not appreciate that the loss and degradation of forests within their jurisdiction had become public knowledge. They forced the government to give the Forest Survey of India (FSI) a monopoly in generating nationwide estimates of forest cover.

Thus, technological potential was subverted by its social organisation. The recent controversy over how Forest Survey of India reports forest cover and the Andhra Pradesh forest departments blaming the Forest Rights Act for deforestation points to the need to address the question of how forest monitoring is organised.

▶ *Wrong definition:* Several critics have highlighted the major problem with Forest Survey of India's approach, viz, wrong definitions. The India State of Forest Report actually measures tree canopy cover. So, their estimate of 'forest cover' includes areas under coffee, tea, rubber, cashew or arecanut plantations, farm forestry plantations of eucalyptus, casuarina or poplar, and even large city parks.

This is neither legally tenable nor practically ignorable. It violates the categorisation in the Forest Conservation Act, 1980, which explicitly classifies coffee, tea, rubber, etc, as 'non-forest uses'. And the resulting overestimates are substantial. For instance, in Chikmagalur district of Karnataka, our mapping showed that the Forest Survey of India estimate of 46% 'forest' cover includes at least 11% of coffee cultivation. In Kodagu district, of the reported 81% 'forest' cover, at least 30% is coffee plantations by the government's own estimates, leaving at most 51% as actual forest.

The Forest Survey of India's forest cover estimate also includes single-species plantations of teak, eucalyptus, etc. But if the reason we try to conserve forests is because they harbour biodiversity, then we must conserve — and, therefore, monitor — natural forests, not forest plantations. Similarly, if forests are important because they meet local needs of firewood, grazing and non-timber forest products, these needs are least likely to be met from single-species plantations. But through most of its 150-year history, the forest service has felled natural vegetation and raised largely single-species plantations, often of exotics. By not distinguishing them from natural forest, FSI hides this trend and its impact on biodiversity and local needs.

Finally, if the purpose of monitoring is to hold forest managers accountable, then one needs to know what is happening in lands under the forest departments' jurisdiction. But for the past 24 years, Forest Survey of India has not been able to overlay legal boundaries on their tree cover maps to distinguish public and private 'forests'.

▶ *Deeper issues:* The Forest Survey of India's response to these criticisms is a promise to use higher-resolution imagery. But how will seeing coffee or eucalyptus plantations more clearly change anything if eucalyptus is still considered to be a forest? Alternatively, one might argue that if only the 'correct' definition of forest were used with 'correct' categories and in 'correct' jurisdictions, we would get the 'correct' picture of India's forest cover. But, in fact, we need to rethink both the concept and the social organisation of forest monitoring.

Conceptually, forests are important for different benefits they provide to different stakeholders. 'Natural' forests maximise some, such as biodiversity and watershed conservation, but more 'open' or 'disturbed' forests are good for local communities for firewood, grazing and other product collection, and plantations may actually be best for timber production or carbon sequestration. One needs information on all these aspects, which means monitoring using multiple categories that can be merged or separated as need be. And, in a country of our size and diversity, this information is useful only if one knows precisely where the vegetation is located: which village, which plot and under what legal category.

The Centre was forced to give the Forest Survey of India a monopoly in generating nationwide estimates of forest cover

Organisationally, one agency based in Dehradun, with a few offices across the country, cannot map vegetation change at the relevant level of detail. Equally, an organisation headed by and reporting to IFS officers will not produce reliable estimates in relevant vegetational and jurisdictional categories, when such information will be used to hold the forest departments accountable.

In other words, forest monitoring is too important to be left to foresters. It must be carried out by an independent agency working in a decentralised and transparent manner in collaboration with civil society, and answerable to a broad-based committee. Forest maps must be publicly accessible on platforms such as Google Earth and Isro's Bhuvan, so that anyone point out errors in wiki mode. They must be overlaid with the legal forest and public land boundaries. Only then can we hope to realise the potential of modern-day technologies for environmental governance and social development.

(The author is senior fellow at the Centre for Environment & Development, Atree, Bangalore)